

## **REMARKS**

### **Status of the Claims**

Claims 1, 2, 4-18, 20, 22 and 25-34 are currently pending in the application. No amendments have been made by way of the present Supplemental Amendment, thus, no new matter has been added. Reconsideration is requested in light of the enclosed Declaration under 37 C.F.R. § 1.132 providing objective evidence of unexpected results which weigh against a finding of obviousness, as follows.

Claims 1, 2, 4-14, 18-31, 33 and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable as obvious over Su, WO 97/08547 (hereinafter, "Su I"), in light of Su, U.S. Patent No. 5,804,684 (hereinafter, "Su II") and further in view of Kappel et al., U.S. Patent Application Publication No. 20040259162 (hereinafter, "Kappel et al."). (*See*, Final Office Action of October 31, 2007, at pages 5-10, hereinafter, "Office Action"). Claims 14-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable as obvious over Su I in view of Su II, and further in view of Kappel et al. and further in view of Seto et al., U.S. Patent Application Publication No. 20050045538 (hereinafter, "Seto et al."). (*See, Id.*, at pages 10-11). Additionally, claim 32 stands rejected under 35 U.S.C. § 103(a) as being unpatentable as obvious over Su I, Su II, Kappel et al. and Natrajan et al., U.S. Patent Application Publication No. 2002/0076823 (*See, Id.* at page 11). Applicants traverse the rejection.

In addition to the amendments and comments previously filed on April 29, 2008, Applicants submit herein a Declaration under 37 C.F.R. § 1.132 by named co-inventor, Toshihiro Mori. The Declaration provides objective evidence of unexpected results.

As stated in the M.P.E.P. at § 716.02, “[a] greater than expected result is an evidentiary factor pertinent to the legal conclusion of obviousness ... of the claims at issue.” (See, M.P.E.P., at § 716.02, citing *In re Corkill*, 711 F.2d 1496, 226 USPQ 1005 (Fed. Cir. 1985)). The M.P.E.P. further states that, “[e]vidence of a greater than expected result may also be shown by demonstrating an effect which is greater than the sum of each of the effects taken separately (*i.e.*, demonstrating “synergism”).” (See, *Id.*, citing *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989)). Applicants understand that they, “must further show that the results were greater than those which would have been expected from the prior art to an unobvious extent, and that the results are of a significant, practical advantage.” (See, *Id.*, citing *Ex parte The NutraSweet Co.*, 19 USPQ2d 1586 (Bd. Pat. App. & Inter. 1991)).

The attached Declaration of Toshihiro Mori shows that use of the claimed antifoaming agents in the presently claimed methods achieves a degree of separation and purification of nucleic acids that would be unexpected to one of ordinary skill in the art, as compared to the closest related prior art, such as Su I. The Table at page 5 of the Declaration clearly shows that use of the claimed antifoaming agents provided a much smaller foam size as compared to the antifoaming agents disclosed in Su I, *i.e.* polyalkylene glycol.

*Graham v. John Deere*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966) has provided the controlling framework for an obviousness analysis. A proper analysis under 35 U.S.C. § 103(a) requires consideration of the four *Graham* factors of: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims that are at issue; (3) resolving the level of ordinary skill in the pertinent art; and (4) evaluating any evidence of

secondary considerations (e.g., commercial success; unexpected results). (*See, Graham v. John Deere*, 383 U.S. at 17, 148 U.S.P.Q. at 467).

Thus, in light of the comments and amendments previously set forth in Applicants' Amendment of April 29, 2008, weighing against the first three factors in the *Graham* factor analysis of obviousness, Applicants now also submit substantial evidence which must be considered under the fourth *Graham* factor as evidence of non-obviousness. That is, Applicants believe that even if, *arguendo*, a *prima facie* case of obviousness has been supported, the evidence presented in the Mori Declaration submitted herewith, when considered in light of all four of the *Graham* factors, tips the balance against a finding of obviousness.

Thus, in light of this additional evidence, reconsideration and withdrawal of the obviousness rejection of claims 1, 2, 4-14 and 18-34 are respectfully requested.

#### **Statement of the Substance of the Interview**

Applicants and Applicants' representatives thank the Examiner for extending the courtesy of an interview on May 6, 2008. The substance of the interview is substantially as reflected in the Interview Summary of May 14, 2008. During the interview, all issues barring allowance of the present claims were discussed.

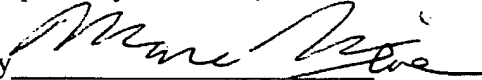
### CONCLUSION

If the Examiner has any questions or comments, please contact Thomas J. Siepmann, Ph.D., Registration No 57,374, at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Dated: June 16, 2008

Respectfully submitted,

By 

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Attachments: Declaration under 37 C.F.R. § 1.132 by Toshihiro Mori (6 pages)